CHAPTER II

Congress, Flood Control, and Multipurpose River Development 1912-1933

The Mississippi River floods of 1912 and 1913 were significant in the history of congressional flood control policy, but equally significant were other major floods. From the late 1890s until 1917, all of the country's major river basins experienced periodic inundations. The 1907 flood virtually devastated Pittsburgh's "Golden Triangle" area and caused $6.5 million in damages. This disaster sparked the formation of the first large flood control lobby group outside the lower Mississippi -the Pittsburgh Flood Commission. The commission's 1912 report became a landmark study of diversified flood control programs including reservoirs, levees and floodwalls, and reforestation.[1] The Pittsburgh flood of 1907 and the Ohio floods of 1913 opened a new chapter in the history of flood control. They severely damaged heavily settled regions in Pennsylvania and Ohio. The losses in the Ohio floods of 1913 amounted to $147 million while they amounted to "only" $61 million in Mississippi's predominantly agricultural flood plain during the flood of the same year. Also, the Ohio floods (in the Miami Valley area) killed 467 people, while the slowly rising Mississippi seldom claimed lives.[2] City-dwellers who had thought themselves relatively safe from flooding suffered as much as farmers had previously on the banks of the Mississippi in other floods.

The destruction resulting from the Ohio and Mississippi floods, along with flood damage on a number of other rivers from California to New England, stirred Congress to think seriously about a nationwide program of flood control. Spearheading this reform was Senator Francis G. Newlands (R-Nevada), author of the Reclamation Act of 1902 and the indefatigable proponent of a multipurpose inland waterways program that would encompass flood control, navigation, water power, and irrigation.[3]

***Refugees and livestock on a levee during the Mississippi River** flood, 1912.*

Newlands, and a brilliant group of conservationists who worked closely with him, convinced President Theodore Roosevelt that traditional rivers and harbors navigation projects should not be considered separately from other possible water resources uses. In 1907, the year of the great Pittsburgh flood, Roosevelt appointed an Inland Waterways Commission to study the entire question of water resources. The commission, guided by Newlands and his associates, recommended that the federal government undertake a coordinated program of multipurpose river development under the control of a permanent commission appointed by the President.[4]

This recommendation was quickly translated into a bill that Newlands introduced in the Senate in 1909. Congress, however, was unwilling to transfer the gigantic rivers and harbors navigation improvement program into the hands of an independent commission-especially one that would no longer rely on the Corps of Engineers for its decisions. Newlands criticized the Corps and proposed replacing it with civilian engineers responsible to a cabinet-level commission. However, the rivers and harbors bloc in Congress was quite satisfied with the Corps and its own Rivers and Harbors Committee. Moreover, to eliminate serious pork barrel abuses, in 1902 Congress had created within

the Corps of Engineers a Board of Engineers for Rivers and Harbors. Undaunted, from 1909 to 1916 Newlands tried to push his own legislation through Congress, but each time he was defeated.[5] The first break in this wall of congressional intransigence came in 1916 with the creation of the House Committee on Flood Control. This action was sponsored by congressmen from the lower Mississippi River states, led by the popular and powerful Speaker of the House, James B. "Champ" Clark (D-Missouri). It also received support from the Ohio Valley states, which had been hit hard by floods. Congressmen interested primarily in navigation improvements were suspicious of the effect the new committee would have on the Rivers and Harbors Committee, but there was general agreement that machinery should be established to funnel congressional funds into all areas of the nation that suffered from severe flooding.[6] The debate's timing, in the spring of 1916, was fortuitous for flood control proponents; the Mississippi River and several others were again over their banks. Congressman Thaddeus H. Caraway (D-Arkansas) told the House that he supported the measure because the district he represented "is composed of eleven counties, and a portion of every one of those counties is now under water."[7] The measure passed without a recorded vote, but it appeared to have no significant opposition once its proponents argued that it posed no threat to traditional rivers and harbors projects.[8]

The establishment of this committee is of obvious importance, since it created a permanent forum for congressional flood control proponents. The committee was dominated by congressmen from states with serious flood problems, particularly from the lower Mississippi River Valley. In fact, one of its charter members in 1916 was the new Democratic congressman from Louisiana, Riley J. Wilson, the man who, 19 years later, introduced the bill that became the Flood Control Act of 1936.

The most concrete result of the Progressive Era's flood control movement was the passage of the Flood Control Act of 1917, the most important piece of flood control legislation prior to the 1936 act. While its scope was limited to the lower Mississippi and the Sacramento rivers, the latter river devastated by hydraulic mining in California, it established important precedents and frameworks for the Flood Control Act of 1936. The 1917 act was important in four respects. To begin with, it marked the

first time that Congress appropriated funds openly and primarily for the purpose of flood control. As one congressman said during debate on the bill, the measure "removes the mask" from years of covert federal flood control spending under the "pretext" of navigation improvements.[9] Second, it established a congressional commitment to fund a long-range and (it was believed) comprehensive program of flood control for at least two flood-prone areas -- the lower Mississippi and the Sacramento rivers.[10]

Third, the act introduced the principle of including the requirement for local financial contributions in flood control legislation. This provision, found in Section l(b), was the subject of considerable debate in the House. It was based on the relatively recent precedent of local contributions for certain rivers and harbors projects. In 1905 Republican Representative Theodore Burton of Ohio, the dominant figure on the House Rivers and Harbors Committee, forced the city of Dallas, Texas, to contribute approximately 30 percent of the cost of a river project that clearly had only local value. It was just one more method Burton hit upon in his long struggle to hold down the massive pork barrel expenditures on rivers and harbors projects having no national value and often little local value. Burton was unable to make local contributions a standard requirement, but such contributions were required in a number of the more dubious rivers and harbors appropriations after 1905.[11]

The issue of local contributions never came up with the Mississippi River Commission, because the local levee districts always appropriated more than did the federal government. Congress stated that by 1917 local interests had spent three dollars for every federal dollar spent on the levees. While congressmen appreciated that this kind of financial burden on lower Mississippi residents could hardly continue, neither would they give up the principle of local contributions. Consequently, the 1917 act stipulated that local interests should pay at least one dollar for every two dollars spent by the federal government. The act authorized the expenditure of $45 million from the federal treasury for Mississippi River flood control, not more than $10 million to be spent in any one year. In addition, local interests were to pay the cost of acquiring rights-of-way for construction and maintenance expenses once the levees were completed. This meant that the local levee boards actually paid about half the total cost of the levee program between 1917 and 1928.[12]

Finally, Section 3 of the act authorized the Corps of Engineers to undertake examinations and surveys for flood control improvements, which were to be "a comprehensive study of the watershed or watersheds" and to provide information regarding the relationship of flood control to navigation, water power, and "other uses as may be properly related to or coordinated with the project." As with the old navigation improvement reports, flood control studies were to be submitted to the Board of Engineers for Rivers and Harbors, which was to judge what federal interest might be involved in the proposed improvements; "what share of the expense, if any, should be borne by the United States"; and the advisability of funding the project.[13] The Board of Engineers must have winced at the second item, because Congress itself could not decide on a generally acceptable policy on local contributions or even a clear rationale for including them in the act. Congress now expected the board to succeed where it had failed.

The Flood Control Act of 1917 changed the federal government's activities on the nation's rivers from a single-purpose program (navigation improvement) to a limited dual-purpose program. Senator Newlands' hopes of a genuine multipurpose program supervised by a civilian commission failed to overcome congressional opposition and President Woodrow Wilson's unwillingness to force the issue on Newlands' behalf, although the idea had been endorsed several times in the Republican and Democratic party platforms between 1908 and 1916.[14] Newlands actually succeeded in getting a waterways commission authorized by Congress in the Rivers and Harbors Act of 1917, but he immediately fell to wrangling with the rivers and harbors bloc over its membership. Newlands insisted on a cabinet-level commission while the rivers and harbors bloc desired a lower level commission that would be more responsive to Congress. Both sides appealed to President Wilson in the spring of 1917, but Wilson, preoccupied with the events leading to U.S. involvement in World War I, had no time for such controversies. The commission was never appointed, and Newlands died in 1919. As a result, neither a waterways commission nor a national program of flood control emerged at this time. All the talk of such a nationwide plan at the time of the establishment of the House Flood Control Committee led to nothing beyond the programs for the lower Mississippi and Sacramento rivers. The door had been opened,

but not very wide.

After World War I, when Congress finally returned to water resources issues, the debate over hydroelectric power had become paramount and, in an odd twist of circumstances, had spurred the development of the most detailed and comprehensive flood control studies and plans ever. Congress had given little attention to hydroelectric dams, and the General Dam Acts of 1906 and 1910 had not addressed the complex issues regarding the many new uses to which the rivers were being subjected, particularly in regard to water power and navigation.[15] Having rejected comprehensive waterways development, Congress decided to move forward in the field of hydroelectric power—an area it had come to believe was critically important. It enacted the Water Power Act of 1920, which created the Federal Power Commission, but it still failed to address the issue of coordinating hydroelectric development with navigation and/or flood control. In order to gain a better understanding of the hydroelectric potential of the nation and the ways its development might be coordinated with other water projects -principally navigation, irrigation, and flood control-the House Rivers and Harbors Committee suggested that the federal government examine the cost for a detailed survey of the nation's navigable rivers. The Secretary of War, acting in his capacity as chairman of the Federal Power Commission; was requested to direct the Corps of Engineers to provide Congress with an estimate of the cost of such a survey.[16]

The Corps' response, sent to Congress in April 1926 and subsequently published as House Document 308 of the 69th Congress, stated that the Corps could survey more than 180 rivers and a number of unnamed tributaries for a total of $7.3 million.[17] Congress responded favorably and began to fund the surveys under the Rivers and Harbors Act of 1927. Major General Harry Taylor, the Chief of Engineers, commenting on the inauguration of the survey program, said it "will have a far-reaching influence in controlling and coordinating all works in connection with the diverse beneficial uses which may be made of the streams under federal jurisdiction." The importance of this work, he thought, was "so pronounced" that it should be started as soon as possible.[18] General Taylor was not exaggerating the significance of this piece of legislation. Historian William Leuchtenburg called it "one of the most important acts affecting water

resources in our entire history."[19]

The "308" reports placed the Corps at the center of multipurpose river development even though the work's major emphasis was on hydroelectric power. In the course of preparing the 308 reports, Corps officers worked closely with water resources officials and experts throughout the nation. They came to know the municipal engineers, the drainage district officials, water power company engineers, and university water resources experts-a far wider circle of people than they had ever had reason to work with previously.[20] Moreover, through the study of river basins such as the Tennessee Valley, Corps officials substantially increased their knowledge of flood hydrology.[21] Indeed, the Corps' 308 report on the Tennessee Valley, published in 1930, provided Senator George W. Norris (R&Nebraska) and the proponents of multipurpose reservoirs in the valley with data that helped them push the Muscle Shoals bill through Congress in 1931. The bill was vetoed by President Herbert Hoover because of its federal retention of power distribution, but Norris's ideas were adopted in 1933 by President Franklin D. Roosevelt and the new Congress, which created the Tennessee Valley Authority in May 1933. Over the next decade the TVA developed a system of multipurpose reservoirs very similar to the system laid out in the Corps' Tennessee River 308 report.[22]

By 1935, the Corps' 308 reports represented the most comprehensive and detailed body of data and planning ideas on multipurpose river development to date; the Corps' engineers, both civilian and military, constituted the largest pool of water resources experts in the nation. Certainly, a number of water resources experts outside the federal government continued to question the Corps' judgment and expertise in flood control matters. However, even opponents of the Corps generally did not impugn the Corps' integrity and efficiency. It was the Corps' outstanding reputation, combined with its domination of federal water resources expertise, that overwhelmed the skeptics. Most congressmen came to accept the Corps as the preeminent water resources agency, and it seemed natural to assign to the Army Engineers the responsibility for constructing and operating a nationwide flood control program.

It was fortunate for the Corps that the 308 reports began to appear in 1930, because in 1927 and 1928 its credibility as an engineering organization had been severely challenged in the

Vicksburg, Mississippi, during the 1927 flood.

aftermath of the "greatest disaster of peace times in our history," in the words of Herbert Hoover, then Secretary of Commerce? Hoover was describing the 1927 Mississippi River flood, which at its height covered 26,000 square miles in seven states. More than 700,000 people were driven from their homes. In some areas the collapse of newly constructed higher levees meant that the floodwaters, which had in the past risen slowly, now rushed across the level countryside and 330,000 people had to be rescued from housetops, levee crowns, and trees. Due to massive and heroic rescue efforts, only about 250 people drowned before boats could get to them.

Total direct property losses were estimated at $236 million. Hoover thought that indirect losses amounted to approximately $200 million. The economic effects were devastating for the lower Mississippi, but were also felt from Boston and New York to California. For many weeks no railroad trains crossed the Mississippi south of St. Louis, and more than 3,000 miles of track were under water. The Red Cross flood relief drive raised $17.5 million to aid flood victims, and total relief contributions from private and governmental sources totaled $31.8 million.24

Attacked in Congress and in the public press for single-minded adherence to outmoded ideas, the Corps no longer

Floodwall at Cairo, Illinois, during the 1927 flood.

attempted to defend the "levees only" policy. Everyone from the poorest sharecropper to the richest landowner understood that something more than levees was necessary, although exactly what was much debated in the coming years. Major General Edgar Jadwin, the Chief of Engineers, further alienated public opinion when, in what seemed an arrogant and obstreperous manner, he defended his recommendations for a new Mississippi River flood control project against all critics, including some of the most well-respected engineers in the country. In particular, he attacked the rival plan of the Mississippi River Commission, from which he had in fact borrowed some of his ideas-both plans called for a mixture of spillways, floodways, levees, and channel clearing-but Jadwin's plan substantially decreased the amount of federal dollars to be committed to the project.

Congressman Frank R. Reid (R-Illinois), chairman of the House Flood Control Committee, wanted to prepare legislation for a nationwide flood control program, prompted by both the Mississippi River flood as well as a smaller but still devastating November flood in New England that killed 55 people and caused approximately $40 million in damages, primarily in Vermont.25 The Mississippi problem, he said, would be dealt with first, but he would urge the committee to keep the national problem

"constantly in mind."[26] Even the conservative *Baltimore Sun* agreed with Reid, stating that the New England flood seemed to justify Reid's proposal to expand Mississippi River basin protection to other parts of the country "which lie at the mercy of the same uncurbed natural forces."[27]

For reasons that are not clear, no such bill emerged from the committee. Possibly the gigantic costs of the Mississippi flood control program caused Reid and others to shrink from assuming added burdens. Another possibility is that the complex debate that shortly erupted over engineering, financial, and political questions in regard to Mississippi River flood control may have convinced the Mississippi Valley people who dominated the Flood Control Committee that enlarging the bill to address a nationwide program would be futile and only endanger immediate action on the Mississippi. As it turned out, the congressional representatives from New England who appeared before the committee were staunch states' rights conservatives and, unlike their colleagues from the South, could not bring themselves to ask for federal flood control aid.[28]

The nature of the controversies that raged in Congress and in the national press over the Mississippi River question are beyond the scope of this study except for the issue of local contributions. Suffice to say that most of Jadwin's plan was finally adopted, although with the expectation that parts would be modified as more data were obtained. So far as financing was concerned, President Calvin Coolidge continued to insist throughout the congressional debate that local interests pay a portion of the cost of the new flood control projects to be constructed by the Corps of Engineers, just as they had done since the Flood Control Act of 1917. Nevertheless, it was clear that local levee boards had exhausted their financial resources. Many of them had issued bonds far beyond the total assessed valuation of their districts, and financial experts said any further issues would go unsold. Given this incontrovertible evidence, Coolidge relented. As a conciliatory gesture, however, Congress added the following statement during the final drafting of the bill.

> It is hereby declared the sense of Congress that the principle of local contribution toward the cost of flood control work, which has been incorporated in all previous national legislation on the subject, is sound, as recognizing the special interest of the local population in its own protection, and as a means of preventing inordinate requests for unjustified items of work having no material national interest.

The statement went on to say that an exception to the general principle was being made in the present act in view of the major contributions already made by the local levee districts and that flooding on the Mississippi was a problem "far exceeding those of any other river in the United States."[29]

This compromise satisfied all but a small minority firmly committed to the principle of no federal flood control funds without local contributions, regardless of the economic hardship. The final version of the bill sailed through Congress with large bipartisan margins and was signed by Coolidge on 15 May 1928. In the presidential election in November, both the Republicans and Democrats claimed the legislation as their own, but neither party endorsed any wider program of flood control.[30]

With the exception of the laws authorizing certain multipurpose dams in the West, such as Boulder Dam and Bonneville, the Flood Control Act of 1928 was the last major piece of flood control legislation passed by Congress prior to the 1936 Flood Control Act. Its significance is difficult to assess, but three aspects of it are worth noting. First, the long debate over the bill and the various flood control plans considered during the course of debate greatly increased public (and congressional) awareness of the major advances in flood control theory and practice since 1916 and 1917. Also, radio broadcasts and news films showing the destructiveness of floodwaters had an impact on the public that newspaper accounts could not equal.[31] Second, the 1928 act put flood control on a par with other major projects of its time. The act authorized an expenditure of $325 million, the largest public works project appropriation ever authorized by the federal government, even exceeding the construction cost of the Panama Canal, which was $310 million. Finally, the act raised the debate on local contributions to a new level. The issue became one of the central questions surrounding the Flood Control Act of 1936.

President Coolidge, General Jadwin, and key Republicans in Congress were the major architects of the Flood Control Act of 1928, but it fell to Herbert Hoover to undertake its implementation from 1929 to 1933. Hoover, of course, had barely entered upon his duties as President in 1929 when the stock market crashed and the national economy began the long slide into the greatest depression in the country's history. Although Hoover was far more interested in flood control and multipurpose development than any President had been since Theodore Roosevelt,

the nation's economic woes confined him to a small, but nonetheless significant, role in the development of federalflood control activities. He can be credited withadvancing the cause of flood control in the United States in three major ways.

First, Hoover helped initiate some important water resources projects. He worked with political leaders in California to start the Central Valley project, which involved constructing a series of high dams on the Sacramento, Kings, San Joaquin, and American rivers. Of even greater portent, he issued orders in 1930 for the Corps of Engineers to begin detailed engineering studies for the construction of the Cove Creek (later named Norris) dam in the Tennessee Valley as a flood control and hydroelectric power project-the first major reservoir project to be undertaken by the federal government outside of the Bureau of Reclamation dams in the West. If Hoover had been reelected in 1932, he may well have had most of the work undertaken that was eventually done by the TVA. His efforts to construct the Cove Creek dam were blocked by Senator Norris and his allies, who wanted the electric power from the Tennessee Valley dams kept in federal hands rather than being turned over to private companies as Hoover wished, but both men agreed on the flood control aspect of the project and endorsed it as a legitimate federal activity.

Second, Hoover pushed the flood control work on the Mississippi ahead as an unemployment relief measure — uniting work relief with flood control in a manner that the New Deal was to continue doing throughout the 1930s and that became one of the rationales for the 1936 Flood Control Act. Third, through the new Chief of Engineers, Major General Lytle Brown, he directed that the boundaries of the Corps of Engineers' Districts be redrawn to approximate better the major river basin areas of the nation.[32] This can be looked upon as a key administrative change to move the Corps into position to administer multipurpose projects more efficiently. Thus, in the area of flood control, as in a number of other areas, the Hoover administration provided a bridge between the Harding-Coolidge era and the New Deal.